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CENTRAL INTELLIGENCE AGENCY REPORT

INFORMATION REPORT

CD NO.

COUNTRY Germany (Russian Zone)

DATE DISTR. 24 January 194

SUBJECT Turbine Projects at the Soviet Ingenieur Bureau II in Pankow-Niederschönhausen

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SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

25X1 1. The successor to Capt. Korsch who has returned to Russia is Engineer Petroff. Petroff was formerly the chief of the Ingenieur Bureau in Goerlitz which has now been dissolved.

2. A new project for a gas turbine installation for ships has been undertaken. Total output is to be approximately 72,000 horse power. This will be subdivided onto two propellers. For the whole installation 14 compressors are planned, each compressor group consisting of one high, two medium, and four low pressure compressors. The turbines are to be designed to work with an initial pressure of 25 Atm. at 700 degrees centigrade. According to some of the German engineers, the space allotted for the installation is too small to permit adequate supervision while the machines are running, and according to these same engineers, such an installation is doomed to failure. The definite Russian decision has not yet been made.

3. Another project is the installation of a 12,000 horse power gas turbine to be erected in the USSR for a smelting plant. This particular work has already started. The turbine is destined to provide the motive power for furnace blowers. The turbine will be directly coupled to the blower; it will have 3,200 revolutions per minute, and a compressor will be coupled over an intermediate gear from the blower axle. Revolutions per minute for this compressor will be 5,400.

4. Further work under way consists of the construction of an unspecified number of experimental gas turbines of the 320 and 1,000 horse power variety. These are to be delivered by 1949. The chief bottleneck of this order is the obtaining of suitable high grade metal. The firm of Max Jahn in Leipzig, (Georg Schwarzstr. 181-183) has received the order to produce the raw casts for the axle of the turbine, the blades and the highly stressed screws. The turbine shaft is to be made from "F.K.D.M.10" metal. The metallurgical breakdown is:

Cr	2.8 per cent
W	.4 " "
Mo	.5 " "
V	.8 " "
Mn	.4 " "
Si	.2 " "
C	.2 " "

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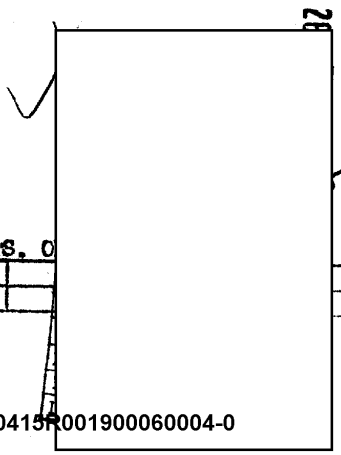

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The blades are to be made from "Trinidur". The metallurgical breakdown is:

Ni	30	per cent
Cr	15	" "
Ti	2	" "
Si	.72	" "
Mn	.69	" "
C	.15	" "

The composition of the screws is:

Mo	1.4	per cent
Cr	1.3	" "
Si	.8	" "
V	.6	" "
Mn	.5	" "

The firm of Jahn in Leipzig has not had much experience in producing such steel blocks, and none whatever in the production of "Trinidur" metal. These metals used to be provided by Krupp in Essen. The firm of Jahn is, however, being advised by Professor Kohlmeyer (ex University Charlottenburg) on these matters. The finishing of these blocks is being carried out by Krupp-Gruson in Magdeburg.

5. Axial Flow Compressors

The rotor and stator blades for these compressors are made from brass and light metal alloys. They are produced by the Oberspreewerk and have been pressed.